Society of Cardiology responded to the on – line questionnaire. The majority of respondents agreed that medical devices and equipment are not adequately regulated at the moment in Turkey. Moreover they believe that the majority of the cardiologists value recommendations from colleagues. When making risk/benefit decisions, surgeons rely on sharing information about the most recent and evidence of the mesh behavior in particular the peer groups of especially Turkish Society of Cardiology, rather than using more formal avenues. Cardiologists would be most likely to turn to the risk assessment unit at the hospital they work for. Then they would like to report the adverse events to the Ministry of Health of Turkey General Directorate of Pharmaceuticals and Pharmacy, which is the main regulating institution in Turkey. CONCLUSIONS: The qualitative analysis results indicate that efforts should be directed to inform cardiologists about the functioning of General Directorate of Pharmaceuticals and Pharmacy and the guidelines of medical device regulations.

PRIM45
A MAXIMUM LIKELIHOOD SIMULATION TECHNIQUE FOR ESTIMATING ADVERSE EVENT RATES FROM PUBLISHED TRIALS
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OBJECTIVES: Clinical trial publications commonly report only adverse event (AE) rates occurring above an arbitrary threshold. Our objective was to devise a meta-analysis technique that allowed trials to be included even when AE rates fell below threshold. METHODS: A maximum likelihood simulation (MLS) was devised that assumed all AE trial results lay in the same binomial distribution truncated by reporting thresholds. AE data from osteoarthritis trials were retrieved. The MLS was executed using the random number generator and binomial distribution function of the Excel software, a simple modeling tool. Ten million iterations, needed for convergence, were run for each tenth of a percent up to the highest rate reported. For each iteration the values generated from the binomial function were compared to the published AE rates and/or thresholds. The rate with the most matches was designated the point estimate (PE). The range from the 2.5 to 97.5 percentiles of matches was the 95% confidence interval (CI). Verification was conducted for 2 AEs of 2 compounds. Results for 2 AEs reported in all etoricoxib trials were compared to Comprehensive Meta-Analysis (CMA) results. Results for 2 AEs below reporting thresholds of one or more diclofenac trials were compared to results from equivalent SAS code using RANDN and FROIC. RESULTS: The MLS estimated FEIs and CIs for the etoricoxib AEs within 0.001 of those estimated in SAS, identical for hypertension, MLS), CI [0.051, 0.065]). The MLS executed in CafeSim estimated PEs and CIs for the etoricoxib AEs within 0.001 of CMA (hypertension PE 0.058 (0.059 for MLS), CI [0.051, 0.065]). The MLS executed in CafeSim estimated FEIs and CIs for the diclofenac FEIs within 0.001 of those in SAS, identical for hypertension, MLS), CI [0.022, 0.032]). When trials reported widely differing rates the MLS converged slowly. The MLS estimated 0.000 when no trials reported the AE rate. CONCLUSIONS: An MLS technique assuming a common binomial distribution may provide a useful estimate of AE rates when they occasionally fall below reporting thresholds.

PRIM146
AN EXCEL CALCULATOR TOOL TO PERFORM META-ANALYSIS
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OBJECTIVES: To quickly perform meta-analyses, both direct and indirect treatment comparisons, using Microsoft Excel. METHODS: We used a random effects DerSimonian and Laird model by inputting the number of studies and binary outcomes variables to report the Relative Risk (RR) for each study and a pooled overall RR. The Q statistic and the I-squared statistic were used to examine heterogeneities across studies. Indirect treatment comparisons between specific studies were performed post hoc. Indirect pair-wise comparisons were also performed between studies. RESULTS: Three studies (Lipsky, Keystone, and Klarenskog) were examined, comparing a combination of tumor necrosis factor (TNF) inhibitors plus methotrexate (MTX) to MTX monotherapy. Each study was evaluated using the number of patients achieving American College of Rheumatology (ACR) scores 20, 50, and 70. To test the Excel calculator, the number of patients obtaining ACR20 scores was used in the replication. The overall RR was 1.89 (95% CI: 0.89, 4.00), which was not statistically significant (p-value = 0.10). There were significant heterogeneities across treatments and the I-squared statistic was 96.2% (p-value < 0.001). The Lipsky and Keystone studies had statistically significant treatment effects relative to the Klarenskog trial. Lipsky vs. Klarenskog: RR 2.23 (95% CI: 1.37, 3.61, p-value < 0.001). Keystone vs. Klarenskog: RR 2.17 (95% CI both direct and p-value < 0.001). CONCLUSIONS: The meta-analysis Excel calculator is a simple and quick way to run random effect models with binary data. The replication output matched the results of the original paper.

PRIM147
COMPARISON OF INDIRECT AND MIXED TREATMENT COMPARISON (MTC) META-ANALYSIS TECHNIQUES USED IN THE EVALUATION OF NEW PROTEASE INHIBITORS FOR THE TREATMENT OF CHRONIC HEPATITIS C
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OBJECTIVES: To compare indirect and MTC meta-analysis techniques used in the evaluation of the protease inhibitors, boceprevir and telaprevir, in combination with peginterferon alfa and ribavirin for the treatment of patients with genotype 1 chronic hepatitis C. METHODS: We conducted an indirect comparison (IC) study with meta-analysis (MTC) methods. Two previous publications were identified: a conference poster (Diels et al) and a full publication (Cooper et al). The main difference between the methodologies is that Cooper et al used an adjusted indirect comparison and a random-effects MTC model whereas Diels et al used a fixed-effects MTC model. Diels et al included three further studies that compare peginterferon alfa-2a and alfa-2b without active therapies. Cooper et al conducted a random-effects adjusted indirect comparison that included two additional telaprevir trials that were excluded from Diels et al. The primary outcome in both studies was the proportion of patients who achieved a sustained virologic response. Diels et al reported no significant difference in treatment naive patients and a significant effect in favour of telaprevir for treatment experienced patients. When Diels et al applied a random-effects model the effect of telaprevir being superior in treatment experienced patients was non-significant. The results reported by Cooper et al showed no significant difference between boceprevir and telaprevir, and did not vary in sensitivity analyses. CONCLUSIONS: Comparison of these two studies highlights considerable methodological differences between the two approaches and the two methodologies used. While MTC methods are growing in popularity and importance, certain nuances of approaches can result in important differences in interpretation.

PRIM148
SAMPLE SIZE AND POWER CONSIDERATIONS IN NETWORK META-ANALYSIS
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OBJECTIVES: To extend well-established methods for sample size in power calculations in pair wise meta-analysis to the scenario where multiple treatments are being analyzed in a network meta-analysis. METHODS: We derive methods of approximating the ‘effective number of patients’ in indirect comparison meta-analysis where no head-to-head evidence is available. We calibrate these approaches with conventional approaches for estimating the required sample size and power in pair wise meta-analysis. RESULTS: The calibration of the above two methods allows for a simple assessment of the power and strength of evidence for each treatment comparison in a network of treatments. The resulting measures are 1) the statistical power associated with each treatment comparison made in a network meta-analysis; 2) the effective number of patients for each comparison contrasted, which can be contrasted with the required sample size for the particular comparison to gauge the strength of evidence. We provide an illustrative example using data from a network meta-analysis of interventions for smoking cessation. CONCLUSIONS: The proposed measured follow the format of well-known sample size and power measures. They are easy to calculate and will resonate with a statistically non-sophisticated audience.

PRIM149
A RANDOM UTILITY MODEL USING A TRANSACTION COST POLITICAL APPROACH TO ADJUST HEALTH SYSTEMS TO ECONOMIC TRANSITION
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OBJECTIVES: This research uses a comparative analysis framework between national health care systems and continues the theoretical development of the 3P theory. It demonstrates that sets of cost reduction strategies and by physicians, Pharmacists and Patients as well as different meanings of cost (cost the system, cost to the physician, and cost to the patient) changes per group of physicians lead to very different decision points in each system and variations in sets of clinical choices for similar patients. A random utility model is proposed. METHODS: Data are extracted from the endopexius database for 600 physicians, transcripts from qualitative focus groups and estimates from the centralized database of 6 patients’ surveys on cost of medicines (www.endopexius.org). The thinking about cost is classified in Cost S (cost to the System), Cost Ph (cost to the Physician) Cost Pa (cost to the Patient). The conceptual frames work has been mainly developed from pair of country comparisons, especially from the French, German and Italian physician analyses (Huttin, Andral, 2003; Atella et al., 2003, Brenner et al. 2002). RESULTS: A comparative intercountry framework is used to weight differently combinations of (Cost S, Cost Ph, Cost Pa) in the system. A generalization has been proposed with a list of six categories: Cost S-Cost Ph-Cost Pa. RESULTS: Physician j among N physicians in J Health financing systems. CONCLUSIONS: This research step aims to propose a link between a research line on transaction cost politics and several statistical developments for a stated revealed preference disease economics. It will help to identify the type of random utility models that would clearly model how variations of preferences from Physicians, Pharmacist, Patients that could help to manage variations between different national health care financing systems.

PRIM150
LATENT TRANSITION ANALYSIS AS A TOOL FOR ANALYSING CLINICAL DATA
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OBJECTIVES: To uses Latent Transition Analysis (LTA) to assess the difference in the change in severity of a Neurological disorder between patients in two treatment groups. The patients in the study were assigned to one of two treatment groups Active or Placebo over a period of 6 months and the results to a question-
naired to measure the severity of the disease were assessed to assess whether there was a difference between the treatment groups in terms of change in severity over the 6 month period. METHODS: Latent Transition Analysis is used to explain the responses to the questionnaire by grouping patients into categories (severity groups) based on their responses. There are three parameters that can be estimated using LTA; Membership probabilities (probability of belonging to a particular severity category), Transition probabilities (probability of moving to a particular severity category) and Item response probabilities. These parameters are compared between the two treatment groups to determine if there is a difference between them. Two covariates were included in the model to investigate their effect and robustness. RESULTS: Analysis showed that there was no significant difference between the treatment groups in terms of Membership probabilities or Transition probabilities. One of the covariates was found to have a significant effect on the responses. The effect of the covariate was different for the two treatment groups and had no apparent effect on the placebo group. Active group.

CONCLUSIONS: It has been shown that LTA can be a useful tool for analysing multivariate ordinal data and that its application in clinical data analysis has advantages over some of the more common techniques.

PRM151

COLLAPSIBILITY AND CENSORING: WHAT'S THE BIAS IN ESTIMATED SURVIVAL TIME?

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OBJECTIVES: Treatment effects in survival analysis are often expressed as hazard ratios (HR), which are not useful in effectiveness analysis since they do not entail a fixed rate. Consequently, parameter estimates are often expressed as the quantity that is expected to be attained (80% and 100% respectively), while AHRQ and DERP had the lowest (0% and 50% respectively), with EQ-5D being a more common technique. Of the 6 agencies, NICE and NHS Scotland showed the main objective was measuring clinical effectiveness, but presented evidence as- sessed (80% and 100% respectively), while AHRQ and DERP had the lowest (0% and 20% respectively). CONCLUSIONS: Though the distinction between "efficacy" and "effectiveness" is substantial, the terms are not always used appropriately or consistently. Often, the uses of the terms in HTAs are misleading. This is a barrier to clear communication, but the implications might be broader.